Vol. 9. Numb. 19.

The Athenian Mercury:

Tuesday, *February* 14. 1693.

A Continuation of the Letter about Brutal Mechaniſm.

HAving in the laſt Mercury diſpatch'd the Objections againſt the rationality of Brutes, I come to prove from your *own Definition of Matter, and from the Laws of the Motion of Matter, that 'tis impoſſible for a Swallow to purſue a Fly,* (and ſo of other Creatures) *by reaſon of any motion or impreſſion made on the Optick Nerve.*

Matter according to the *Carteſians*, is *Bulk extended into length, breadth, and thickneſs, paſſive, impenetrable, and diviſible.* In the proſecution of this Argument alone, I ſhall endeavour to obviate all that ever hereafter can be ſaid in favour of the Mechaniſm of Brutes; therefore I ſhall be a little larger upon it, tho I contract what I wou'd ſay upon the other Heads: I ſhall therefore premiſe theſe *Poſtulates*, which I believe all Philoſophers aſſent to.

1. Matter can't move of it ſelf.

2. A Body mov'd, and meeting with another Quieſcent Body in its way, if it propells, it communicates its own Motion to it in proportion to its Bulk, provided that the Body propell'd be Homogeneous to it.

3. That Body which propells or attracts another Body in proportion to its bulk and diſtance, propells or attracts all, or that are of a leſſer bulk, and nearer, or much eaſier.

4. If a ſubtle fine Body meets a Compact and aptionous or porous Body, it either pervades it as the Air and Rays of Light, or reflects without propulſion, as Wind againſt a Wall directly or obliquely.

5. A Body that moves in a Curve-Line moves unnaturally; its Natural Motion being in a ſtrait line, a Stone whirl'd round in a Sling, flyes direct when freed from it, after the manner of a Tangent line to a Circle.

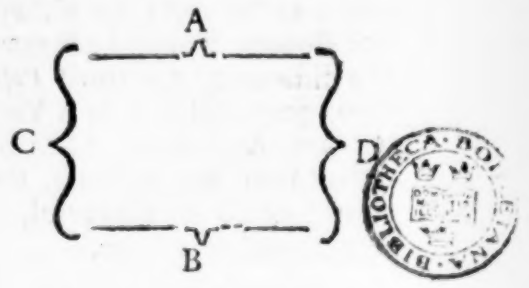
6. Matter hitting Matter directly, propells directly, or reflects directly, or if obliquely, it reflects at equal Angles.

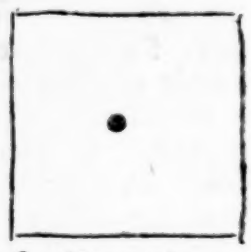
7. Matter that attracts matter, does it in a right line.

I. Matter cannot move of it ſelf, being *paſſive.* A Swallow moves, (when ſhe purſues her prey;) but ſince ſhe does not move her ſelf, which way receives ſhe the motions communicated to her? as ſometimes in a Right line, a *Curve*, a *Circle*, a *Parabola*, beſides many irregular figures and turnings, either ſhe receives this motion from matter within, or from without; the firſt, which has too much abſurdity in it, you pretend not to, therefore I ſhall examine the laſt.

II. The *unknown ſomethings* in Brutes, which I call *Senſes*, are the firſt Original Springs that receive motion from ſomething without, and communicate it to the whole Machine. For inſtance, you ſay, "That an Ob-"ject by its effluvious particles ſhakes the Nerves which "are at the bottom of the Eyes, and theſe again by "communicating the impulſe to other dependent Nerves, "ſets the whole Body in motion, according to the Na-"ture of the impreſſion, as in ſome Clocks, if ſuch a "ſtring be pull'd, you have the laſt hour, and parts "of hours; if ſuch a Spring be moved, all the Wheels "are ſet on going, and you know the next hour that "wou'd be: and ſo of other ſimple or Compound moti-"ons." But this is urg'd without a juſt reflection upon the Nature of the firſt motion, *viz.* the Nerves at the Eye, as alſo how its poſſible the ſame motion of the Optick Nerves ſhou'd cauſe ſuch vaſtly different and irreconcileable motions in the Body.

To the firſt, Let us but conſider the Nature of theſe fine particles of matter, or ſubtle Effluviums, and what Power they have to work upon the Optick Nerve, and yet after the ſame manner as matter works upon matter; for that's the ſuppoſition: firſt, I ſay that 'tis impoſſible there ſhou'd be any ſuch Effluviums and particles of matter that can have this effect; for ſuppoſing ten thouſand men upon a Plain, 5000 rankt toward the South *A*, with their Faces full North, looking upon an Object juſt as high as their Eyes *B*; alſo 5000 rank'd to the Weſt *C*, with their Faces looking upon a little ſcituated Object to the Eaſt *D*, it follows that the particles which fly from the Object *B*, to the Eyes of all thoſe men which ſtand in rank at *A*, ſhall interfere with theſe that fly from *D* towards the rank of men at *C*: So that either here muſt be penetration of Bodies, or ſuch oppoſition and claſhing together, that the Objects beyond would be inviſible: Or further, ſuppoſe the whole Square to be ſet with men on every ſide, every effluvium or particle of matter which flows from the Object in the midſt to the Eyes of all about it, muſt be one and many millions at the ſame time; or elſe two particles which touch one another at the Object in the middle, muſt alſo touch one another when they come to the two corners of the Square, 'tis the ſame in a Circle where they lye iſſuing from the Center extended in diſtance proportionable to their length.





Again, Suppoſe a man views a great part of the Heavens at once, can the Effluviums which ariſe from every part of the Surface of ſo many millions of miles expanſe, come all juſtling and crowding into the little Circumference of the Eye, unleſs myriads of myriads hide themſelves one in another, and be no bigger, by joyning together? No, 'tis as impoſſible as the *Doctrine of Brutal Mechaniſm* it ſelf.

If it be Objected, that theſe particles of matter are extream fine, and therefore may more eaſily ſlide betwixt one another: I anſwer, that if they are matter, we muſt ſuppoſe 'em to be *Cubes*, *Squares*, *Parellipipedons*, *Priſms*, *Pyramids*, *Cones*, *Cilinder*, or ſome other irregular figures. And 'tis as evident as 2 and 3 makes 5, that great Bodies bear ſuch proportion to one anothers Power and motion, as little Bodies do; imagine then that millions of Steeples, Pillars, Graveſtones, Milſtones, and ſuch like, flew ſwittly and cloſe together, and another company as numerous and cloſe crowded ſhou'd croſs their way, and meet all together, muſt not here be either penetration to get clear of one another, or ſuch a juſtling and oppoſition as would wholly deſtroy and confound one anothers carriere: So in ſmaller Atoms, the ſides and edges wou'd be the ſharper to faſten upon one another, and where they hit full, they wou'd act upon one another according to their power and motion, as the greater Bodies we juſt now imagin'd wou'd do.

This ſufficiently deſtroys both the Peripatetick and *Carteſian* Hypotheſis, of Objects ſending any particles or Effluviums to the Eye to create Viſion. But ſuppoſe, after

ter all, that ſome fine Effluviums, (as fine as that fancy'd ſubtle matter which *Deſcartes* himſelf invented, when he made his World) do ſtrive to make an Impreſſion upon the Eye, from the ſecond Poſtulate it's plain that they wou'd either pervade the Eye, or reflect back again, they being neither homogeneous as to their Compoſition, nor affording any proportionality in Bulks fit for Propulſion. Now ſince 'tis impoſſible for theſe *Effluviums* to proceed from a Hare to a Dog's Eye, 'tis alſo impoſſible the Hare ſhou'd move the Dog's Eye at all, becauſe there muſt be a reſiſtance of Parts before any Motion can enſue, ſo that every way the Argument is inconcluſive.

Again, Impreſſion or Propulſion does not bring Bodies nearer together, but drives 'em farther off; ſo that if a Hare made any Impreſſion upon the Dog's Eye, it wou'd drive the Dog away from her, rather than cauſe him to run after her. And what is yet as forreign to the Properties of Matter, Why does a Dog turn and run in Curve lines ſometimes to meet the Hare, whenas the Impreſſion, if any wou'd, comes to his Eye in a right line? and therefore his Motion muſt be direct according to the laſt *Poſtulate*; theſe ſeem to me ſuch monſtrous Abſurdities, that there's no way for the *Carteſians* to get clear of 'em, but by ſaying the Hare is a *Load-ſtone*, and that ſhe draws the Dog by the Eyes, which is yet as merry as the reſt; for if there were any ſuch a magnetick Power, it wou'd act more powerfully hard by than at a diſtance by the third *Poſtulate*; altho' a Dog ſometimes goes within 6 or 8 Yards of a Hare ſitting, without any Attraction, when if he were 60 or 80 Yards diſtant from her in Chaſe, the Attraction (according to them) wou'd be powerful, and his Eyes wou'd ſerve him inſtead of a Noſe.

III. Now I preſume it will be a fair Concluſion, that if Matter does not firſt give motion to theſe *Curious Machines* (as I hope I have prov'd) then it muſt be the Animal Soul, or in *Solomons* phraſe, the *ſpirit of a beaſt*, which is a very remarkable diſtinction from the Body. Such as are not willing that Dogs ſhould be capable of Simple and Compound Ideas rais'd by external Objects, after the very ſame manner as they are rais'd in a Man, ſhou'd ſhow where and how they differ; ſince the Organs of Senſation proper to excite Ideas, are common to both Men and Brutes, and ſince external Objects themſelves have the ſame Effect upon both, either for Sights, Sounds, *&c.* How can any *Carteſian*, according to the aboveſaid *Poſtulates*, or their own definition of matter, ſhow how dull paſſive matter as ſuch, be capable of the following Inſtances: The Proviſion of the Ant, the Fear and Conſcientiouſneſs of a Dog when he has done an ill thing, the Docibility of an Elephant. What immediate Motion is there upon any one of the Senſes, that makes a Dog uſe ſuch propable means in ſeeking his loſt Maſter, or when he is loſt himſelf, how comes he to find the way home, or beget Puppies? A good breed of Watches, and ſuch as when left behind us at any place would follow us home, would be an extraordinary Contrivance indeed of Matter. What makes the Fox uſe ſuch Stratagems and Cunning to eſcape the Hounds, or to ſeek his Prey, nothing but Memory, Judgment, Imagination, Reflection, Compounding, Dividing, and making intelligent Concluſions from true or very probable Premiſes, as theſe Inſtances all abound with: Nothing, I ſay, can thus actuate or influence Brutes but a thinking rational Spirit within 'em which exerts it ſelf after ſuch different Modifications.

Nor is the Sacred Volumes ſilent in this Caſe, but give us alſo their Teſtimony againſt the Mechaniſm of Brutes. The Serpent is ſaid to be *more ſubtle than any Beaſt of the Field*, and we are adviſ'd to *be wiſe as Serpents, but harmleſs as Doves*; *the Stork and Swallow know their appointed ſeaſons*; *the Oxe knoweth his Owner, and the Aſs his Maſter's Crib: The Eagle ſitteth upon the high Rock, and eſpieth for Meat*; (an act of Judgment) with many more places to the like purpoſe; ſo that I think there needs no more to prove that *Brute Creatures* are capable of thinking, and conſequently that they are not *pure Machines or Clock-work*.

Nay, I think it ſo far from injuring Religion, to prove that Beaſts are rational, that it highly ſerves it; for if we allow them to be Machines, 'tis but riſing one ſtep higher, and aſſerting the Mechaniſm of Men as a yet more Curious Piece of Clock-work, for that's the thing that the Atheiſts are now driving at.

I have only now to prove, (and I ſhall do it briefly) that Matter can't think, and draw this laſt Conſequence, that *if Matter cannot think, and yet there is ſomething in Brutes that does think, then there is ſomething in Brutes that is not Matter*, by which I underſtand the *Brutal Spirit or Animal Soul, as before.*

Thinking is not inherent in *ſimple Matter*, for then every Stone and Tree wou'd be a rational Creature.

Nor is it inherent in Compound Matter, for then a Buſhel of Corn would make a thinking Animal.

Nor is thinking any modification of Matter, as hot, cold, ſquare, round, white, red, *&c.* Theſe being ſimple Idea's in us, and not in Bodies, as is granted by all Modern Philoſophers, and as I ſhall demonſtrate, if I have occaſion to ſpeak on this Head.

Nor can the fine inſenſible parts of Matter think, for there's no reaſon that a ſmall *Rivulet* ſhould be wiſer than the *Ocean*; or is there any more Analogy betwixt thought and ſmall particles of matter, than betwixt thought and great Bodies: Nor can *Matter moving* think, ſince Motion is only a mode or accident of matter, and not eſſential to it; but why an Arrow ſhou'd be wiſer when flying in the Air, than ſtill in the Quiver, is a merry ſort of a Riddle. But if this accident of Motion helps Matter to think, the Sun, Moon and Stars are much more intelligible than we; nay, our common Culinary Fires, which are only Matter briskly mov'd, wou'd be our Maſters.

Laſtly, I know but one other Objection of theſe *Material Gentlemen*, viz. That 'tis Matter aptly Inform'd, rightly Diſpoſited and duely Organiz'd, which is capable of thinking. To this I Anſwer, That they ought to explain what they mean by this *apt Information, right Diſpoſition*, and *due Organization*, and then this Objection ſhall have its Anſwer; but I'm ſatisfied I ſhall always want that ſatisfaction; for all that I could ever yet meet with, either know not what they mean when they ſpeak of *due and proper Organization*, &c. or elſe they bring it under ſome of the former Heads which I have Anſwer'd already: So that I hope this Argument is every way Concluſive, That Brutes are not mov'd mechanically; That Matter can't think, but that Brutes do think, and therefore that there is ſomething in them which is immaterial and rational, and which act upon their Bodies.

And now, *Sir*, I have gone through what I firſt Propos'd, and am willing to think that I have perform'd what you expected in the Cloſe of your Letter: I am not over-fond of making a Convert of you, but if you find any thing that's reaſonable and concluſive, I hope you'll lay by the Prejudices of an *Opponent*, and only ſuppoſe it ſpoken by a Friend; or elſe that it is a Child of your own Brain, ſo that Truth may not loſe a Votary of you, nor

SIR,

Your, &c.

R. S.

LONDON, Printed for John Dunton at the *Raven* in the *Poultrey*, 1693.